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STRUCTURE FILE UPDATES: 18 NOV 2007 HIGHEST RN 954747-20-7  
 DICTIONARY FILE UPDATES: 18 NOV 2007 HIGHEST RN 954747-20-7

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

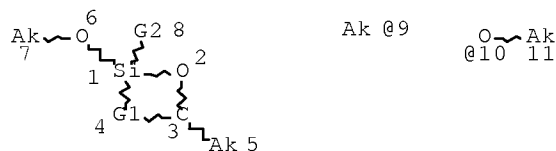
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<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que stat l5

L3 STR



REP G1=(2-5) C

VAR G2=9/10

NODE ATTRIBUTES:

CONNECT IS E1 RC AT 5

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 5

GGCAT IS SAT AT 7

GGCAT IS SAT AT 9

GGCAT IS SAT AT 11

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L5 21 SEA FILE=REGISTRY SSS FUL L3

100.0% PROCESSED 603 ITERATIONS

21 ANSWERS

SEARCH TIME: 00.00.01

=> d his

(FILE 'HOME' ENTERED AT 09:19:31 ON 19 NOV 2007)

FILE 'HCAPLUS' ENTERED AT 09:20:04 ON 19 NOV 2007  
E US20070055036/PN

L1           1 S E3  
            SEL RN

FILE 'REGISTRY' ENTERED AT 09:20:37 ON 19 NOV 2007

L2           5 S E1-5

FILE 'LREGISTRY' ENTERED AT 09:28:55 ON 19 NOV 2007

L3           STR

FILE 'REGISTRY' ENTERED AT 09:34:54 ON 19 NOV 2007

L4           1 S L3  
L5           21 S L3 FUL  
L6           2 S L2 AND L5  
            SAV L5 LOE948/A

FILE 'HCAPLUS' ENTERED AT 09:36:16 ON 19 NOV 2007

L7           11 S L5

FILE 'CAOLD' ENTERED AT 09:36:50 ON 19 NOV 2007

L8           0 S L5

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 09:38:02 ON 19 NOV 2007

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FILE COVERS 1907 - 19 Nov 2007 VOL 147 ISS 22

FILE LAST UPDATED: 18 Nov 2007 (20071118/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 17 ibib abs hitstr hitind 1-11

L7 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1250858 HCAPLUS Full-text

DOCUMENT NUMBER: 144:129033

TITLE: Alkyne Hydrosilylation Catalyzed by a Cationic Ruthenium Complex: Efficient and General Trans

AUTHOR(S): Addition  
 CORPORATE SOURCE: Trost, Barry M.; Ball, Zachary T.  
 Department of Chemistry, Stanford University,  
 Stanford, CA, 94305-5080, USA  
 SOURCE: Journal of the American Chemical Society (2005),  
 127(50), 17644-17655  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 144:129033

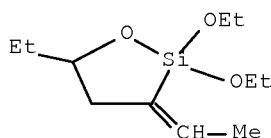
AB Hydrosilylation of 1-alkynes catalyzed by ruthenium cationic acetonitrile  
 cyclopentadienyl half-sandwich complexes afforded  $\alpha$ -substituted vinylsilanes;  
 propargyl alcs. were converted to silylated allyl alcs. and  $\beta$ -hydroxyketones.  
 The complex  $[\text{Cp}^*\text{Ru}(\text{MeCN})_3]\text{PF}_6$  is shown to catalyze the hydrosilylation of a  
 wide range of alkynes. Terminal alkynes afford access to  $\alpha$ -vinylsilane  
 products with good regioselectivity. Deuterium labeling studies indicate a  
 clean trans addition process is at work. The same complex is active in  
 internal alkyne hydrosilylation, where absolute selectivity for the trans  
 addition process is maintained. Several internal alkyne substrate classes,  
 including propargylic alcs. and  $\alpha,\beta$ -alkynyl carbonyl compds., allow  
 regioselective vinylsilane formation. The tolerance of a wide range of  
 silanes is noteworthy, including alkyl-, aryl-, alkoxy-, and halosilanes.  
 This advantage is demonstrated in the direct synthesis of triene substrates  
 for silicon-tethered intramol. Diels-Alder cycloaddns.

IT 392700-16-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (regioselective hydrosilylation of alkynes, acetylenic alcs. and  
 carbonyl compds. catalyzed by ruthenium cationic half-sandwich  
 complexes)

RN 392700-16-2 HCAPLUS

CN 1-Oxa-2-silacyclopentane, 2,2-diethoxy-5-ethyl-3-ethylidene- (CA  
 INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 23

IT 108191-41-9P 193006-92-7P 219736-38-6P, 3,10-Tridecadiyne-1,13-  
 diol 392700-04-8P 392700-08-2P 392700-10-6P 392700-12-8P  
 392700-14-0P 392700-16-2P 392700-20-8P 392700-21-9P  
 392700-22-0P 392700-23-1P 392700-25-3P 392700-26-4P  
 392700-35-5P 447442-15-1P 489469-17-2P 556776-84-2P  
 556776-85-3P 556776-86-4P 556776-95-5P 609306-86-7P  
 609307-02-0P 609307-03-1P 609307-04-2P 609307-07-5P  
 797762-55-1P 797762-62-0P 797762-63-1P 797762-65-3P  
 797762-66-4P 797762-69-7P 797762-71-1P 869206-60-0P  
 873450-70-5P 873450-73-8P 873450-81-8P 873450-82-9P  
 873450-83-0P 873450-84-1P 873450-86-3P 873450-91-0P  
 873450-92-1P 873450-93-2P 873562-43-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (regioselective hydrosilylation of alkynes, acetylenic alcs. and

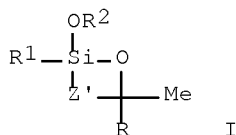
carbonyl compds. catalyzed by ruthenium cationic half-sandwich complexes)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

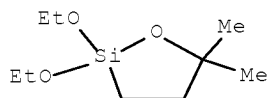
L7 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:429420 HCAPLUS Full-text  
 DOCUMENT NUMBER: 142:464454  
 TITLE: Preparation of oxa-silacyclopentane type cyclic silicone compound in single step reaction for organic silicone resin having alcoholic hydroxyl group with good long-term stability  
 INVENTOR(S): Komuro, Katsuhiko; Suzuki, Hiroshi  
 PATENT ASSIGNEE(S): Toagosei Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2005044828	A1	20050519	WO 2004-JP16445	20041105
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2007055036	A1	20070308	US 2006-577948	20060911
PRIORITY APPLN. INFO.:			JP 2003-377752	A
				20031107
			JP 2004-39063	A
				20040216
			WO 2004-JP16445	W
				20041105

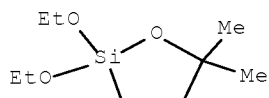
OTHER SOURCE(S): MARPAT 142:464454  
 GI



- AB A cyclic organic silicone compound I is produced by reacting an olefin ZRC(OH)CH<sub>3</sub> and an alkoxyasilane R<sub>1</sub>SiH(OR<sub>2</sub>)<sub>2</sub> in the presence of a transition metal catalyst and an organic silicone resin having an alc. hydroxyl group is obtained by hydrolyzing and condensing the organic silicone compound I or a mixture of the organic silicone compound and a multifunctional alkoxyasilane, wherein Z = C<sub>2</sub>-5 terminal alkenyl; R = Me or H; R<sub>1</sub> = C<sub>1</sub>-3 alkyl or alkoxy group; R<sub>2</sub> = C<sub>1</sub>-3 alkyl group; and Z' = C<sub>2</sub>-5 alkylene group. Thus, 348 mmol 3-hydroxy-3-methyl-1-butene and 383 mmol triethoxysilane were reacted in the presence of divinylidisiloxane platinum complex to give a cyclic silicone compound with yield 82% and b.p. 117-120° at 13,300 Pa, 240 mmol of which was condensed with 441 mmol methyltriethoxysilane and 120 mmol hexamethyldisiloxane to give an alc. hydroxy-containing silicone resin, showing good long term stability.
- IT 851667-88-4P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of cyclic organic silicone compds. for organic silicone resin having alc. hydroxyl group with good long-term stability)
- RN 851667-88-4 HCAPLUS
- CN 1-Oxa-2-silacyclopentane, 2,2-diethoxy-5,5-dimethyl- (CA INDEX NAME)



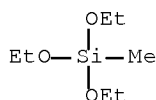
- IT 851667-89-5DP, trimethylsilyl-terminated  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of cyclic organic silicone compds. for organic silicone resin having alc. hydroxyl group with good long-term stability)
- RN 851667-89-5 HCAPLUS
- CN 1-Oxa-2-silacyclopentane, 2,2-diethoxy-5,5-dimethyl-, polymer with triethoxymethylsilane (9CI) (CA INDEX NAME)
- CM 1
- CRN 851667-88-4
- CMF C9 H20 O3 Si



CM 2

CRN 2031-67-6

CMF C7 H18 O3 Si



IC ICM C07F007-18

ICS C08G077-14

CC 37-3 (Plastics Manufacture and Processing)

IT 851667-88-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of cyclic organic silicone compds. for organic silicone resin

having alc. hydroxyl group with good long-term stability)

IT 107-46-0DP, Hexamethyldisiloxane, reaction products with

polysiloxane-silsesquioxanes 851667-89-5DP,

trimethylsilyl-terminated

RL: IMF (Industrial manufacture); TEM (Technical or engineered

material use); PREP (Preparation); USES (Uses)

(preparation of cyclic organic silicone compds. for organic silicone resin

having alc. hydroxyl group with good long-term stability)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN  
THE RE FORMAT

L7 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:847179 HCAPLUS Full-text

DOCUMENT NUMBER: 136:134826

TITLE: Markovnikov Alkyne Hydrosilylation Catalyzed by  
Ruthenium Complexes

AUTHOR(S): Trost, Barry M.; Ball, Zachary T.

CORPORATE SOURCE: Department of Chemistry, Stanford University,  
Stanford, CA, 94305-5080, USASOURCE: Journal of the American Chemical Society (2001),  
123(50), 12726-12727

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:134826

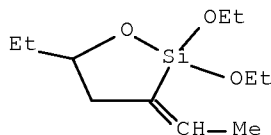
AB The first general nondirected terminal alkyne hydrometalation to afford 1,1-disubstituted vinylsilanes with high regioselectivity is presented. Thus, 5-acetyloxy-1-pentyne is hydrosilylated with (OEt)<sub>3</sub>SiH in the presence of [Cp\*Ru(MeCN)<sub>3</sub>][PF<sub>6</sub>]<sup>-</sup> to give 86% 5-acetyloxy-2-(triethoxysilyl)-1-pentene, (I). The catalyst system extends to internal alkynes to give a single olefin geometry from an unusual trans addition. The mild conditions and functional group tolerance- and the inclusion of alkoxysilanes-open a host of potential subsequent transformations toward the construction of complex target mols. For example, I readily couples with 3-iodoanisole in the presence of [(allyl)PdCl]<sub>2</sub> to give 73% 5-acetyloxy-2-(3-methoxybenzene)-1-pentene.

IT 392700-16-2P 392700-32-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

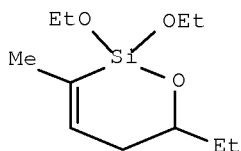
RN 392700-16-2 HCAPLUS

CN 1-Oxa-2-silacyclopentane, 2,2-diethoxy-5-ethyl-3-ethylidene- (CA  
INDEX NAME)



RN 392700-32-2 HCAPLUS

CN 1-Oxa-2-silacyclohex-3-ene, 2,2-diethoxy-6-ethyl-3-methyl- (CA  
INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 392700-04-8P 392700-06-0P 392700-10-6P 392700-12-8P  
392700-14-0P, 8-(Triethylsilyl)-8-nonenoic acid 392700-16-2P  
392700-17-3P 392700-18-4P 392700-19-5P 392700-20-8P,  
2-(Triethoxysilyl)-1-tetradecen-3-ol 392700-22-0P, (Z)-Ethyl  
3-(triethoxysilyl)-2-pentenoate 392700-23-1P 392700-24-2P,  
10-(Triethoxysilyl)-10-undecen-3-yn-1-ol 392700-25-3P,  
(Z)-2-(Triethoxysilyl)-2-tetradecene 392700-26-4P,  
(Z)-3-(Triethoxysilyl)-2-tetradecene 392700-27-5P 392700-28-6P  
392700-29-7P 392700-30-0P 392700-31-1P 392700-32-2P  
392700-33-3P 392700-34-4P 392700-35-5P, 1-Bromo-2-[3-  
(triethoxysilyl)-3-butenyl]benzene 392700-36-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L7 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:422005 HCAPLUS Full-text

DOCUMENT NUMBER: 133:164180

TITLE: Functionalization of alkylalkoxysilanes. Studies  
towards annulations of diterpenoids

AUTHOR(S): Harris, Paul W. R.; Woodgate, Paul D.

CORPORATE SOURCE: Department of Chemistry, The University of  
Auckland, Auckland, N. Z.

SOURCE: Tetrahedron (2000), 56(24), 4001-4015

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 133:164180

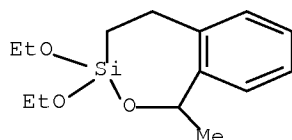
AB Ortho-(2-triethoxysilylethyl) derivs. of aryl ketones undergo oxidative desilylation with H<sub>2</sub>O<sub>2</sub>. Tetralone derivs. have served as model substrates for 14-2-(triethoxysilylethyl)-7-oxopodocarpanes, which have been converted into 2-arylethanols in a four-step sequence (BH<sub>3</sub>·BMS, H<sub>2</sub>O<sub>2</sub>, Et<sub>3</sub>SiH/CF<sub>3</sub>COOH, TBAF) without isolation of intermediate products (oxasilepin, diol, trifluoroacetate). Use of the 14-(2-diethoxysilylmethyl) analog improved the overall yield significantly (75 vs. 40%). Re-oxidation of ring B with CAN gave the Δ<sup>5-7</sup>-oxo derivative, which was converted into an enone-aldehyde by treatment with Collins' reagent. The conjugated alkene was reduced stereoselectively with SmI<sub>2</sub>, which, however, did not promote pinacol coupling of the resulting 1,5-keto aldehyde.

IT 287919-15-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(annulations of arenes via functionalization of  
alkylalkoxysilanes)

RN 287919-15-7 HCAPLUS

CN 2,3-Benzoxasilepin, 3,3-diethoxy-1,3,4,5-tetrahydro-1-methyl- (CA INDEX NAME)



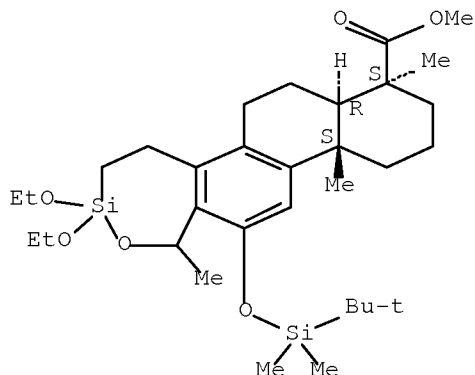
IT 287919-41-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);  
RACT (Reactant or reagent)  
(annulations of diterpenoids via functionalization of  
alkylalkoxysilanes)

RN 287919-41-9 HCAPLUS

CN Phenanthro[1,2-e][1,2]oxasilepin-8-carboxylic acid,  
13-[[[(1,1-dimethylethyl)dimethylsilyl]oxy]-3,3-diethoxy-  
1,3,4,5,6,7,7a,8,9,10,11,11a-dodecahydro-1,8,11a-trimethyl-, methyl  
ester, (7aR,8S,11aS)- (CA INDEX NAME)

Absolute stereochemistry.



CC 30-20 (Terpenes and Terpenoids)

IT 287919-11-3P 287919-12-4P 287919-13-5P 287919-14-6P



287919-15-7P 287919-22-6P 287919-24-8P 287919-25-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(annulations of arenes via functionalization of  
alkylalkoxysilanes)

IT 142452-78-6P 287919-17-9P 287919-21-5P 287919-26-0P  
287919-30-6P 287919-31-7P 287919-35-1P 287919-38-4P  
287919-41-9P 287919-44-2P 287919-45-3P 287919-46-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(annulations of diterpenoids via functionalization of  
alkylalkoxysilanes)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS AVAILABLE  
IN THE RE FORMAT

L7 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:176869 HCAPLUS Full-text

DOCUMENT NUMBER: 128:257472

TITLE: Cycloaddition of thermolytically generated  
methoxymethylsilylene to  $\alpha,\beta$ -  
unsaturated ketones and imines

AUTHOR(S): Gehrhus, Barbara; Heinicke, Joachim; Meinel,  
Susanne

CORPORATE SOURCE: Institut fur Anorganische Chemie,  
Ernst-Moritz-Arndt-Universitat Greifswald,  
Greifswald, D-17487, Germany

SOURCE: Main Group Metal Chemistry (1998), 21(2), 99-104  
CODEN: MGMCE8; ISSN: 0792-1241

PUBLISHER: Freund Publishing House Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Co-thermolyses of 1,2-dimethyl-1,1,2,2-tetramethoxydisilane (1) with 1,4-diheterodienes proceed with unsym. decay of 1 and formal [1+4]-cycloaddn. of methoxymethylsilylene to give, e.g., a 1-methoxy-1-methyl-1,3,2-dioxasilacyclopentene or a 1,3,2-diazasilacyclopentene. Co-thermolytic conversions of 1 with unsatd. ketones or imines, however, afford mixts. of double bond isomers, 1-oxa- or 1-aza-2-silacyclopent-4-enes and 1-oxa- or 1-aza-2-silacyclopent-3-enes, resp. The 4-ene isomers are the major products in case of oxa- and N-alkyl-azasilacyclopentenenes, the 3-ene isomers dominate in a N-phenyl-azasilacyclopentene. The results can be explained by stepwise cycloaddns. of intermediate methoxymethylsilylene via transient oxa- or azasiliranes.

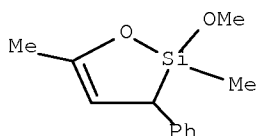
IT 158172-38-4P 205241-04-9P 205241-05-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

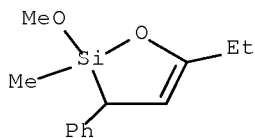
(cycloaddn. of thermolytically generated methoxymethylsilylene to  
 $\alpha,\beta$ -unsatd. ketones and imines)

RN 158172-38-4 HCAPLUS

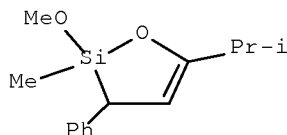
CN 1-Oxa-2-silacyclopent-4-ene, 2-methoxy-2,5-dimethyl-3-phenyl- (CA  
INDEX NAME)



RN 205241-04-9 HCAPLUS  
 CN 1-Oxa-2-silacyclopent-4-ene, 5-ethyl-2-methoxy-2-methyl-3-phenyl-  
 (CA INDEX NAME)

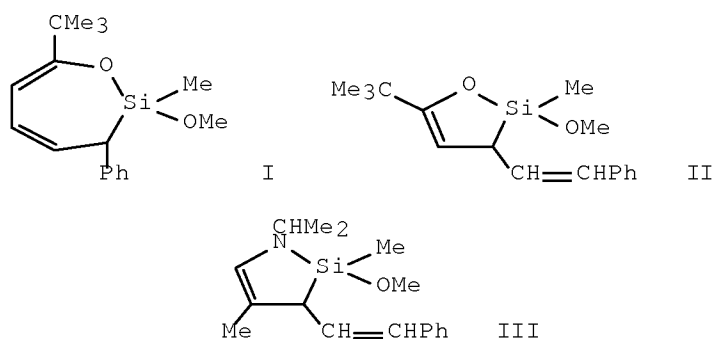


RN 205241-05-0 HCAPLUS  
 CN 1-Oxa-2-silacyclopent-4-ene, 2-methoxy-2-methyl-5-(1-methylethyl)-3-  
 phenyl- (CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)  
 IT 158172-38-4P 158172-39-5P 205241-02-7P 205241-03-8P  
 205241-04-9P 205241-05-0P 205241-06-1P  
 205241-07-2P 205241-08-3P 205241-09-4P 205241-10-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (cycloaddn. of thermolytically generated methoxymethylsilylene to  
 $\alpha,\beta$ -unsatd. ketones and imines)  
 REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE  
 FOR THIS RECORD. ALL CITATIONS AVAILABLE  
 IN THE RE FORMAT

L7 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1996:81130 HCAPLUS Full-text  
 DOCUMENT NUMBER: 124:261125  
 TITLE: Methoxymethylsilylene: (1+6)- and  
 (1+4)-cycloadditions to heterotrienes  
 AUTHOR(S): Heinicke, Joachim W.; Gehrhuis, Barbara  
 CORPORATE SOURCE: Institute Inorganic Chemistry, University  
 Greifswald, Greifswald, D-17487, Germany  
 SOURCE: Heteroatom Chemistry (1995), 6(5), 461-8  
 CODEN: HETCE8; ISSN: 1042-7163  
 PUBLISHER: Wiley  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 GI



AB Co-pyrolytic gas phase reactions of 1,2-dimethyl-1,1,2,2-tetramethoxydisilane with conjugated 1-oxatrienes in a flow-reactor furnish, via intermediate methoxymethylsilylene, mixts. of diastereoisomers of 3-phenyl-1-oxa-2-silacyclohepta-4,6-dienes, e.g., I, and 3-styryl-1-oxa-2-silacyclopent-4-enes, e.g., II, usually including smaller amts. of the corresponding 1-oxa-2-silacyclopent-3-ene isomers. In co-pyrolysis with an analogous N-isopropylazatriene, five-membered rings, e.g., III, were formed preferentially, and seven-membered isomers could not be detected by NMR spectroscopy.

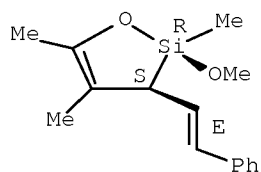
IT 174870-68-9P 174870-70-3P 174870-71-4P  
174870-72-5P 174870-74-7P 174870-75-8P  
174956-09-3P 174956-11-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 174870-68-9 HCAPLUS

CN 1-Oxa-2-silacyclopent-4-ene, 2-methoxy-2,4,5-trimethyl-3-(2-phenylethenyl)-, [2 $\alpha$ ,3 $\alpha$ (E)]- (9CI) (CA INDEX NAME)

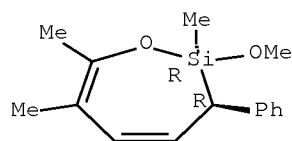
Relative stereochemistry.  
Double bond geometry as shown.



RN 174870-70-3 HCAPLUS

CN 1-Oxa-2-silacyclohepta-4,6-diene, 2-methoxy-2,6,7-trimethyl-3-phenyl-, cis- (9CI) (CA INDEX NAME)

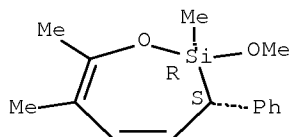
Relative stereochemistry.



RN 174870-71-4 HCAPLUS

CN 1-Oxa-2-silacyclohepta-4,6-diene, 2-methoxy-2,6,7-trimethyl-3-phenyl-, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.

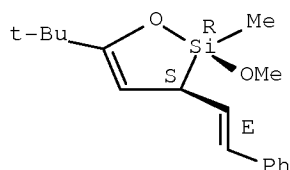


RN 174870-72-5 HCAPLUS

CN 1-Oxa-2-silacyclopent-4-ene, 5-(1,1-dimethylethyl)-2-methoxy-2-methyl-3-(2-phenylethenyl)-, [2 $\alpha$ ,3 $\alpha$ (E)]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

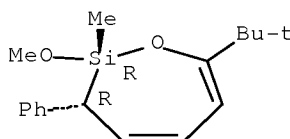
Double bond geometry as shown.



RN 174870-74-7 HCAPLUS

CN 1-Oxa-2-silacyclohepta-4,6-diene, 7-(1,1-dimethylethyl)-2-methoxy-2-methyl-3-phenyl-, cis- (9CI) (CA INDEX NAME)

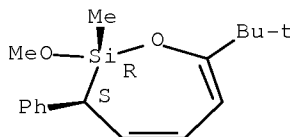
Relative stereochemistry.



RN 174870-75-8 HCAPLUS

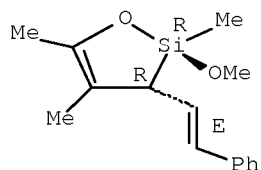
CN 1-Oxa-2-silacyclohepta-4,6-diene, 7-(1,1-dimethylethyl)-2-methoxy-2-methyl-3-phenyl-, trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.



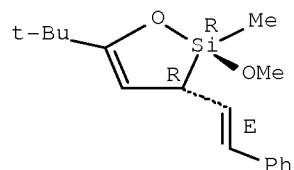
RN 174956-09-3 HCAPLUS  
 CN 1-Oxa-2-silacyclopent-4-ene, 2-methoxy-2,4,5-trimethyl-3-(2-phenylethenyl)-, [2 $\alpha$ ,3 $\beta$ (E)]- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
 Double bond geometry as shown.



RN 174956-11-7 HCAPLUS  
 CN 1-Oxa-2-silacyclopent-4-ene, 5-(1,1-dimethylethyl)-2-methoxy-2-methyl-3-(2-phenylethenyl)-, [2 $\alpha$ ,3 $\beta$ (E)]- (9CI) (CA INDEX NAME)

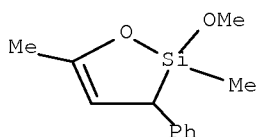
Relative stereochemistry.  
 Double bond geometry as shown.



CC 29-6 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 22  
 IT 174870-64-5P 174870-65-6P 174870-66-7P 174870-67-8P  
 174870-68-9P 174870-69-0P 174870-70-3P  
 174870-71-4P 174870-72-5P 174870-73-6P  
 174870-74-7P 174870-75-8P 174870-76-9P  
 174870-77-0P 174956-07-1P 174956-08-2P 174956-09-3P  
 174956-10-6P 174956-11-7P 174956-12-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

L7 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1994:605453 HCAPLUS Full-text  
 DOCUMENT NUMBER: 121:205453  
 TITLE: Synthesis and reactivity of functional  
 1-methyl-silacyclopentenes  
 AUTHOR(S): Heinicke, J.; Gehrhus, B.; Meinel, S.  
 CORPORATE SOURCE: Institut fuer Anorganische Chemie,  
 EMA-Universitaet Greifswald, Soldtmannstr. 16,  
 Greifswald, D-17489, Germany  
 SOURCE: Journal of Organometallic Chemistry (1994),  
 474(1-2), 71-82  
 CODEN: JORCAI; ISSN: 0022-328X  
 DOCUMENT TYPE: Journal

LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 121:205453  
 AB The silylenes MeSiCl, MeSiOMe and MeSiNMe<sub>2</sub> can be thermally generated from disilanes and trapped by butadiene, isoprene and 2,3-dimethylbutadiene to give functionally-substituted silacyclopentenes. Some examples of cycloaddns. to heterodienes are included to demonstrate the scope and mechanism of the reaction. The reactivity of 1-chloro-1-methyl-silacyclopent-3-ene has been studied.  
 IT 158172-38-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 158172-38-4 HCAPLUS  
 CN 1-Oxa-2-silacyclopent-4-ene, 2-methoxy-2,5-dimethyl-3-phenyl- (CA  
 INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)  
 IT 100-40-3P, 4-Vinylcyclohexene 15983-92-3P 16054-12-9P  
 24429-72-9P 24429-79-6P 50694-31-0P 50694-33-2P 50694-36-5P  
 55544-25-7P 73357-64-9P 119820-51-8P 119820-52-9P  
 158172-19-1P 158172-20-4P 158172-21-5P 158172-22-6P  
 158172-23-7P 158172-24-8P 158172-25-9P 158172-26-0P  
 158172-27-1P 158172-28-2P 158172-29-3P 158172-30-6P  
 158172-31-7P 158172-32-8P 158172-33-9P 158172-34-0P  
 158172-35-1P 158172-36-2P 158172-37-3P 158172-38-4P  
 158172-39-5P 158172-40-8P 158172-41-9P 158172-42-0P  
 158172-43-1P 158172-44-2P 158172-45-3P 158172-46-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

L7 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:6591 HCAPLUS Full-text

DOCUMENT NUMBER: 114:6591

TITLE: Silicon functionalized silyl enol ethers. 4.  
 Effects of variations of alkoxy substituents  
 upon cyclizations of dialkoxy-2-chloroethylsilyl  
 enol ethers to form 2,2-dialkoxy-1-oxa-2-  
 silacyclohexanes

AUTHOR(S): Walkup, Robert D.; Obeyesekere, Nihal U.; Kane,  
 Robert R.

CORPORATE SOURCE: Dep. Chem. Biochem., Texas Tech. Univ., Lubbock,  
 TX, 79409-1061, USA

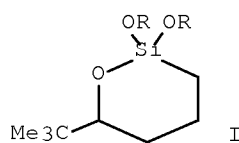
SOURCE: Chemistry Letters (1990), (7), 1055-8  
 CODEN: CMLTAG; ISSN: 0366-7022

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:6591

GI



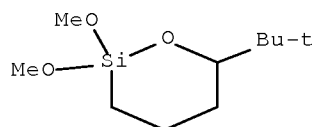
AB Various dialkoxychloroethylsilyl enol ether derivs. of pinacolone  
 $\text{Me}_3\text{CC}(\text{:CH}_2)\text{OSi}(\text{OR})_2\text{CH}_2\text{CH}_2\text{Cl}$  [R = Me, Et, (OR) $_2$  =  $\text{MeCHOCH}_2\text{CHOMe}$ ,  $\text{Me}_2\text{COCH}_2\text{CHOMe}$ ,  $\text{Me}_2\text{COCH}_2\text{CMe}_2$ ], prepared by lithiation of pinacolone with  $\text{LiN}(\text{CHMe}_2)_2$  in  $\text{Et}_2\text{O}$ , silylation with  $\text{Cl}_3\text{SiCH}_2\text{CH}_2\text{Cl}$  followed by alkoxylation, upon treatment with  $\text{Bu}_3\text{SnH}$  and AIBN, underwent free-radical cyclizations to yield isolable 2,2-dialkoxy-1-oxa-2-silacyclohexanes I. As the bulkiness of the alkoxy groups increased, the selectivity of the reaction for forming cyclized instead of directly reduced acyclic byproducts improved.

IT 130891-57-5P 130891-58-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

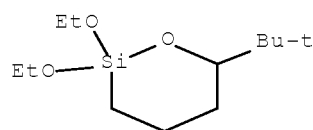
RN 130891-57-5 HCAPLUS

CN 1-Oxa-2-silacyclohexane, 6-(1,1-dimethylethyl)-2,2-dimethoxy- (CA  
 INDEX NAME)



RN 130891-58-6 HCAPLUS

CN 1-Oxa-2-silacyclohexane, 6-(1,1-dimethylethyl)-2,2-diethoxy- (CA  
 INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)

IT 130891-57-5P 130891-58-6P 130891-59-7P

130891-60-0P 130891-61-1P 130891-63-3P 130891-64-4P

130891-65-5P 130891-66-6P 130891-67-7P 130891-68-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

L7 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:405934 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 95:5934

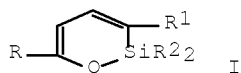
TITLE: Silicon-containing heterocyclic compounds.

XXXVIII. Mass-spectrometric study of

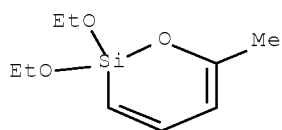
1-oxa-2-silacyclohexa-3,5-diene derivatives

AUTHOR(S): Bochkarev, V. N.; Polivanov, A. N.; Krasnova, T.  
 L.; Labartkava, M. O.; Silkina, N. N.;

Chernyshev, E. A.  
 CORPORATE SOURCE: Gos. Nauchno-Issled. Inst. Khim. Tekhnol.  
 Elementoorg. Soedin., Moscow, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1981), 51(1), 119-22  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 GI



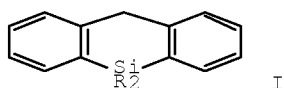
AB The mass spectral fragmentation paths of I (R = H, Me, Ph; R1 = H, Me; R2 = Cl, Me, OEt) depended strongly on the substituents. Rearrangement processes were found and interpreted.  
 IT 76470-24-1  
 RL: PRP (Properties)  
 (mass spectrum of)  
 RN 76470-24-1 HCAPLUS  
 CN 1-Oxa-2-silacyclohexa-3,5-diene, 2,2-diethoxy-6-methyl- (9CI) (CA INDEX NAME)



CC 22-2 (Physical Organic Chemistry)  
 IT 54905-28-1 67078-75-5 67608-54-2 69586-09-0 76470-24-1  
 77436-52-3 77436-53-4  
 RL: PRP (Properties)  
 (mass spectrum of)

L7 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1981:64674 HCAPLUS Full-text  
 DOCUMENT NUMBER: 94:64674  
 TITLE: Formation of pseudomolecular ions of compounds containing a silicon-carbon double bond under electron impact  
 AUTHOR(S): Bochkarev, V. N.; Polivanov, A. N.; Slyusarenko, T. F.; Bernadskii, A. A.  
 CORPORATE SOURCE: USSR  
 SOURCE: Zhurnal Obshchei Khimii (1980), 50(8), 1783-7  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 GI



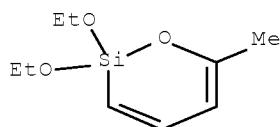


AB The mass spectra of several cyclic Si compds., e.g., I (R = Cl, Et, MeO, F) showed high-intensity peaks corresponding to species containing the Si:C group. Allylic and benzylic compds. also exhibited these peaks.

IT 76470-24-1  
RL: PRP (Properties)  
(mass spectrum of)

RN 76470-24-1 HCAPLUS

CN 1-Oxa-2-silacyclohexa-3,5-diene, 2,2-diethoxy-6-methyl- (9CI) (CA INDEX NAME)



CC 22-2 (Physical Organic Chemistry)

IT 107-37-9 701-35-9 711-53-5 770-10-5 872-46-8 999-94-0  
1112-55-6 1745-72-8 2999-78-2 4142-85-2 13093-11-3  
16054-12-9 18147-55-2 20151-87-5 28871-17-2 32306-76-6  
34106-93-9 38948-58-2 51986-73-3 52023-18-4 54113-94-9  
54321-30-1 57831-44-4 61667-33-2 67608-54-2 75722-33-7  
76470-24-1 76470-25-2 76470-26-3

RL: PRP (Properties)  
(mass spectrum of)

L7 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1976:180327 HCAPLUS Full-text

DOCUMENT NUMBER: 84:180327

ORIGINAL REFERENCE NO.: 84:29235a,29238a

TITLE: Copyrolysis of sym-tetramethoxydimethyldisilane and 2,5-dimethylfuran

AUTHOR(S): Childs, Michael E.; Weber, William P.

CORPORATE SOURCE: Dep. Chem., Univ. South. California, Los Angeles, CA, USA

SOURCE: Journal of Organic Chemistry (1976), 41(10), 1799-802  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

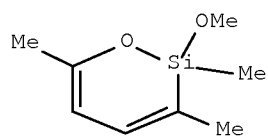
LANGUAGE: English

AB The reaction of methoxymethylsilylene (generated by pyrolysis of sym-tetramethoxydimethyldisilane) with 2,5-dimethylfuran yields 2-methoxy-2,3,6-trimethyl-1-oxa-2-silacyclohexa-3,5-diene and 2-methoxy-2,4,7-trimethyl-1,3-dioxo-2-silacyclohepta-4,6-diene.

IT 58449-10-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 58449-10-8 HCAPLUS

CN 1-Oxa-2-silacyclohexa-3,5-diene, 2-methoxy-2,3,6-trimethyl- (9CI)  
(CA INDEX NAME)



CC 29-6 (Organometallic and Organometalloidal Compounds)  
Section cross-reference(s): 27, 28  
IT 58449-10-8P 58449-11-9P 58449-12-0P 58449-13-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

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